

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: LUMARK

Report Number: P195554

Luminaire Tested: **NAV-AF-02-D-UNV-RW-7050-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195554
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24161)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-02-D-UNV-RW-7050-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 5000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8201 lumens
Efficiency: N/A
Efficacy: 124.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B3 - U0 - G3

Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT

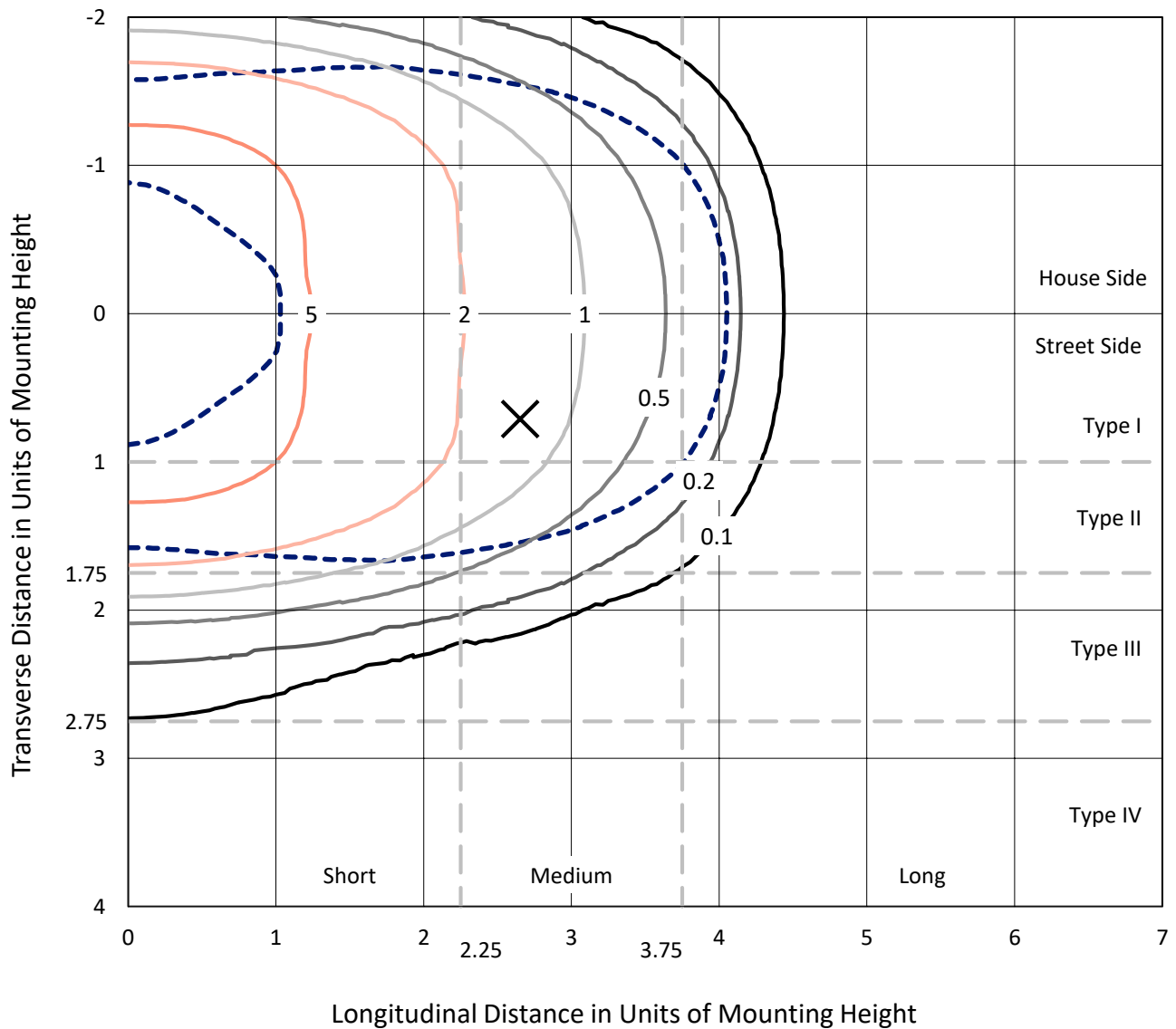


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Iso-Footcandle Lines of Horizontal Illumination

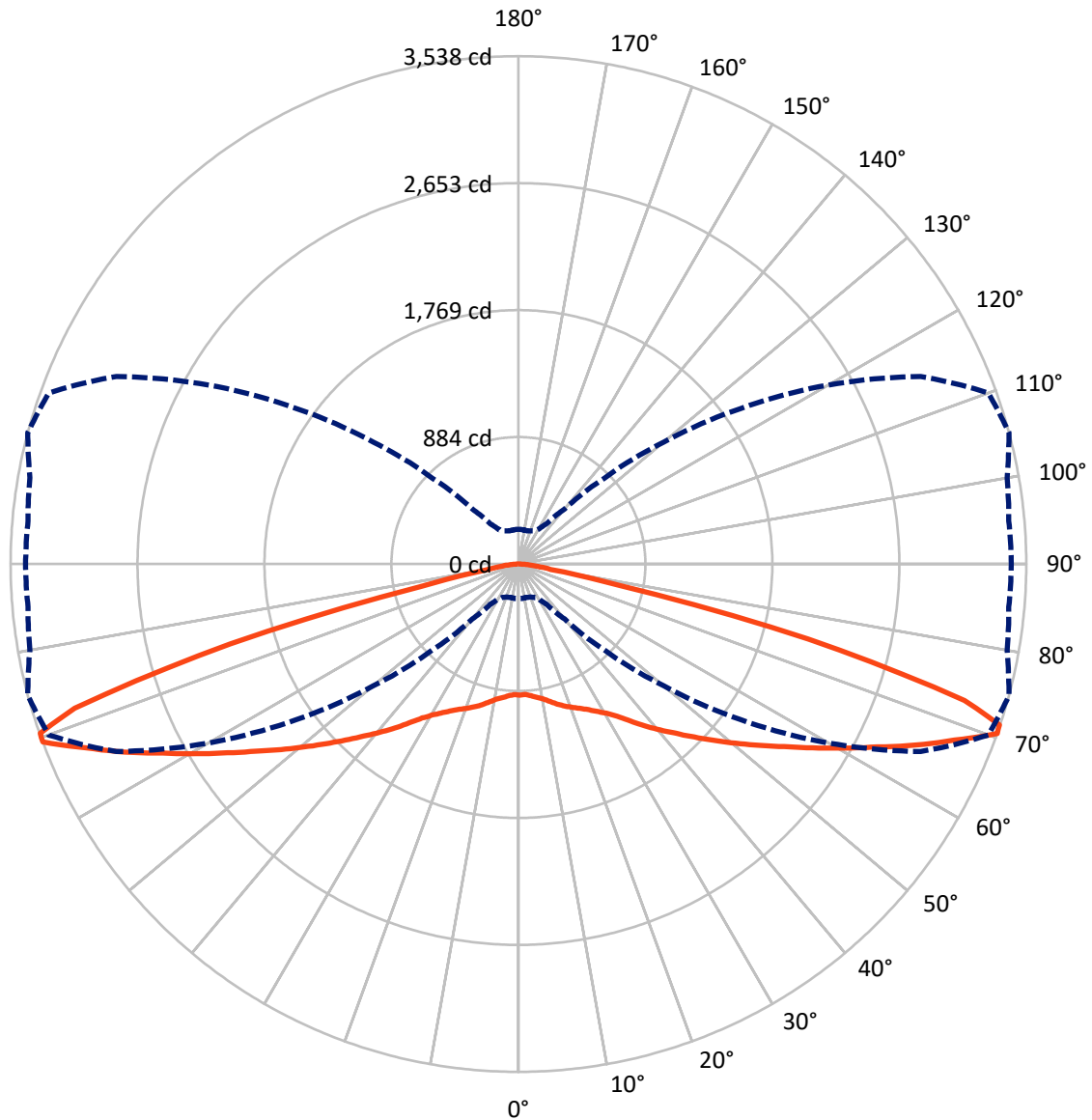
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.2 fc
 Type II - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4100.5	0.0	4100.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	4100.5	0.0	4100.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	8201.0	0.0	8201.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.6	1.1
10°-20°	271.7	3.3
20°-30°	510.2	6.2
30°-40°	898.8	11.0
40°-50°	1489.6	18.2
50°-60°	2072.3	25.3
60°-70°	1956.3	23.9
70°-80°	835.5	10.2
80°-90°	79.0	1.0
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	8201.0	100.0
0°-180°	8201.0	100.0



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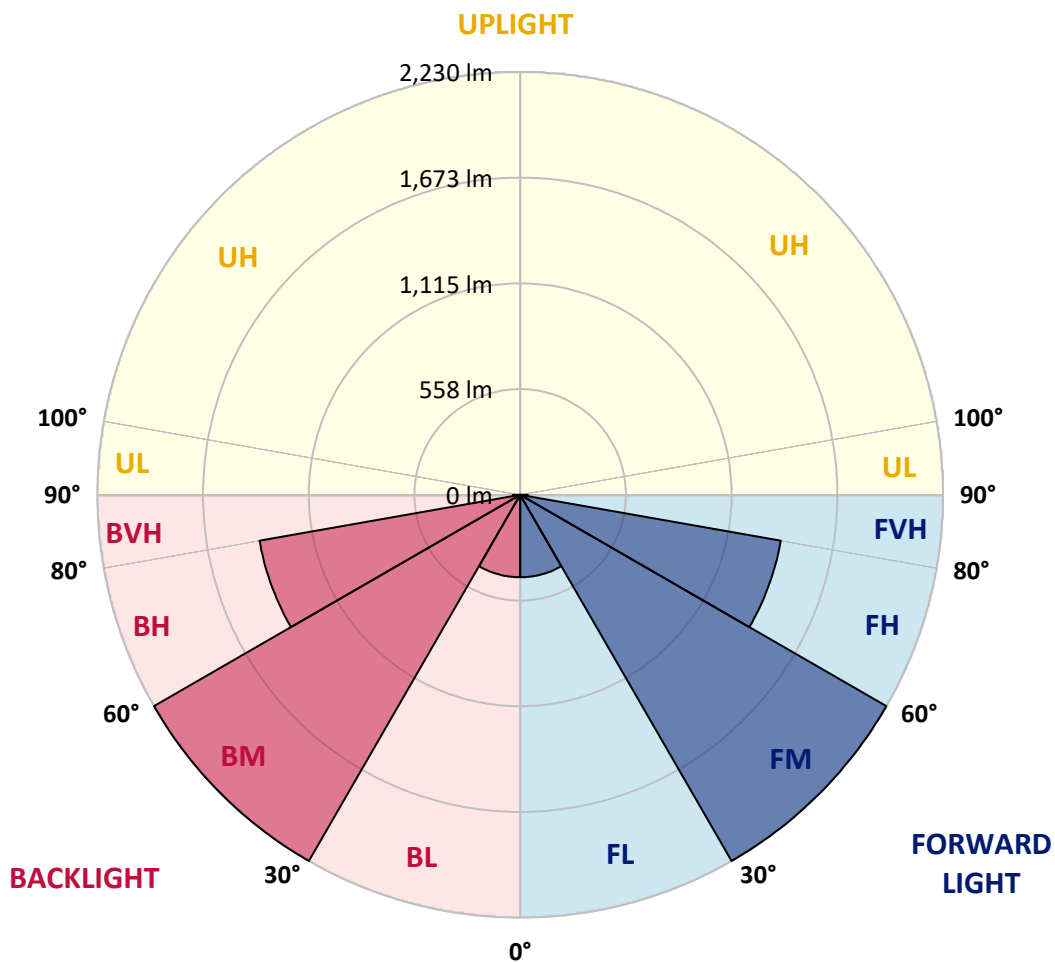
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	434.8	5.3			
FM	(30°-60°)	2230.4	27.2			
FH	(60°-80°)	1395.9	17.0			G1/1800
FVH	(80°-90°)	39.5	0.5			G1/100
BL	(0°-30°)	434.8	5.3	B1/500		
BM	(30°-60°)	2230.4	27.2	B2/2500		
BH	(60°-80°)	1395.9	17.0	B3/2500		G3/2500
BVH	(80°-90°)	39.5	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	913.3	913.3	913.3	913.3	913.3	913.3	913.3	913.3	913.3	913.3	913.3
2.5°	918.9	918.4	918.9	917.4	917.9	917.4	917.4	915.3	915.3	914.3	912.7
5°	908.6	909.7	909.7	909.7	911.2	911.2	913.3	913.8	915.3	916.9	917.9
7.5°	891.7	892.2	893.7	894.8	897.8	902.0	906.1	910.7	914.8	919.9	925.6
10°	877.3	878.3	880.9	883.5	889.1	894.2	901.4	908.6	915.8	924.6	933.3
12.5°	869.6	871.1	875.2	879.3	888.1	894.8	904.5	915.8	925.6	933.8	943.6
15°	870.6	871.1	876.8	882.4	894.8	904.0	917.9	931.2	943.1	952.3	963.6
17.5°	885.5	886.5	892.2	900.4	912.2	924.1	939.0	952.8	968.8	979.6	992.9
20°	914.8	916.3	922.5	931.2	944.1	956.4	971.8	986.2	1002.7	1015.5	1028.9
22.5°	952.8	955.4	962.1	972.9	985.7	1000.6	1016.6	1031.5	1046.9	1059.7	1071.0
25°	1003.7	1006.8	1014.0	1024.8	1037.6	1053.6	1070.0	1085.4	1101.4	1111.1	1120.4
27.5°	1072.1	1077.2	1084.9	1093.7	1105.0	1121.9	1137.3	1150.2	1165.6	1176.4	1182.6
30°	1164.1	1171.3	1177.4	1186.7	1194.9	1212.9	1225.2	1235.5	1247.3	1253.5	1255.0
32.5°	1276.6	1283.3	1289.5	1296.1	1307.4	1323.9	1335.7	1341.4	1347.5	1346.5	1340.9
35°	1403.6	1408.7	1412.3	1424.1	1442.6	1453.4	1462.1	1464.2	1465.2	1454.4	1443.6
37.5°	1537.2	1543.3	1546.4	1564.9	1582.4	1594.7	1598.8	1603.5	1600.4	1582.4	1562.9
40°	1681.6	1688.3	1697.5	1713.5	1734.0	1745.8	1751.0	1750.5	1747.9	1726.8	1695.0
42.5°	1823.4	1831.7	1839.4	1867.1	1884.1	1904.1	1906.7	1906.2	1900.5	1876.4	1839.4
45°	1943.7	1953.5	1969.4	2000.2	2027.5	2051.6	2061.4	2065.0	2059.3	2033.6	1991.5
47.5°	2042.9	2049.6	2069.6	2107.1	2142.1	2177.5	2197.1	2210.9	2210.4	2191.9	2147.2
50°	2110.7	2118.4	2143.1	2185.2	2228.9	2270.6	2309.1	2340.5	2355.4	2342.0	2300.4
52.5°	2130.3	2140.0	2172.4	2222.8	2273.6	2329.7	2387.2	2442.7	2476.1	2484.4	2452.0
55°	2048.0	2058.8	2106.1	2176.0	2259.8	2342.5	2429.9	2509.0	2577.9	2609.8	2596.9
57.5°	1808.5	1816.2	1876.4	1966.8	2086.6	2232.0	2379.0	2523.9	2642.1	2724.9	2739.3
60°	1430.3	1440.0	1505.8	1601.4	1737.6	1921.6	2127.2	2364.6	2596.4	2786.0	2880.1
62.5°	965.2	971.8	1035.1	1122.4	1271.5	1448.8	1678.0	1978.6	2309.1	2647.8	2913.0
65°	506.7	506.7	549.4	610.6	729.3	888.1	1122.9	1431.3	1824.5	2247.4	2691.0
67.5°	294.0	293.5	303.2	317.1	354.6	418.9	548.4	775.0	1147.1	1639.5	2144.1
70°	242.6	241.0	239.5	239.5	245.1	254.9	279.6	341.8	500.1	845.4	1319.3
71°	231.8	230.8	226.6	225.1	227.7	232.8	243.6	272.4	355.1	576.6	985.2
72.5°	218.9	216.4	210.2	207.6	208.1	210.2	213.3	224.6	249.8	327.9	561.7
75°	199.4	193.2	185.5	181.9	180.4	179.9	179.9	183.0	188.6	197.9	230.2
77.5°	176.8	168.1	159.8	156.2	153.7	152.1	151.1	149.0	148.0	152.1	163.9
80°	149.6	140.3	133.6	131.6	130.0	126.9	122.8	118.7	116.1	118.2	125.4
82.5°	115.6	106.4	107.4	107.9	105.4	100.2	96.1	91.5	86.9	85.8	89.4
85°	92.0	87.4	84.3	91.0	85.3	79.1	73.5	65.8	55.0	45.2	49.3
87.5°	39.6	40.1	57.6	86.9	76.1	61.2	50.9	41.1	26.2	19.5	20.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	913.3	913.3	913.3	913.3	913.3	913.3	913.3	913.3
2.5°	912.2	912.2	910.7	909.7	909.7	909.7	908.6	909.1
5°	918.4	919.4	920.5	919.9	921.5	923.0	922.5	922.0
7.5°	928.7	931.8	934.8	936.4	938.4	940.5	941.0	939.5
10°	939.0	945.1	949.8	953.9	956.4	958.5	960.0	959.5
12.5°	951.8	960.5	968.8	977.0	982.6	985.7	988.8	987.8
15°	972.9	982.6	992.9	1003.7	1012.5	1017.1	1021.7	1020.7
17.5°	1001.7	1010.4	1018.6	1029.4	1040.2	1045.3	1050.5	1050.0
20°	1037.6	1044.3	1048.9	1055.1	1065.4	1071.0	1075.7	1074.1
22.5°	1078.7	1080.8	1081.3	1083.4	1091.6	1098.3	1104.4	1106.0
25°	1123.5	1121.9	1118.8	1117.3	1122.9	1130.1	1137.9	1139.9
27.5°	1179.0	1173.8	1166.1	1159.9	1161.5	1170.7	1179.5	1181.5
30°	1248.9	1237.0	1220.6	1208.8	1206.7	1216.5	1225.7	1228.8
32.5°	1328.5	1312.6	1290.0	1272.0	1264.3	1273.0	1281.2	1285.9
35°	1423.1	1405.6	1378.4	1355.2	1342.9	1348.6	1363.0	1368.1
37.5°	1535.1	1511.0	1480.6	1451.4	1430.8	1431.8	1447.2	1453.4
40°	1659.0	1624.0	1585.5	1549.0	1519.2	1517.1	1531.0	1535.6
42.5°	1788.0	1743.3	1698.0	1650.2	1613.2	1606.6	1624.5	1625.1
45°	1926.7	1869.2	1813.2	1757.7	1719.1	1707.3	1724.8	1726.8
47.5°	2074.8	2002.8	1936.5	1876.4	1834.7	1816.2	1833.2	1836.3
50°	2228.9	2154.4	2077.3	2010.5	1961.7	1939.1	1959.1	1961.2
52.5°	2381.6	2311.2	2234.6	2158.0	2098.9	2073.2	2096.9	2104.0
55°	2535.2	2467.4	2395.4	2318.9	2244.4	2221.7	2247.4	2255.1
57.5°	2695.1	2629.8	2564.5	2487.4	2415.0	2380.5	2408.3	2419.1
60°	2871.4	2813.8	2752.1	2674.5	2603.1	2563.0	2586.6	2599.0
62.5°	3044.5	3032.7	2976.7	2896.0	2805.6	2765.5	2785.5	2794.3
65°	3058.9	3250.6	3248.1	3167.9	3041.5	2974.1	2979.8	2983.9
67.5°	2669.9	3109.8	3390.9	3416.1	3275.3	3169.9	3157.6	3160.2
70°	1890.3	2494.1	3090.8	3482.4	3537.9	3456.2	3429.5	3433.6
71°	1514.6	2140.0	2796.8	3323.6	3533.8	3510.2	3495.3	3506.1
72.5°	966.7	1576.8	2216.1	2846.2	3249.6	3365.2	3382.2	3388.9
75°	351.0	678.4	1148.1	1645.1	2085.0	2387.7	2554.3	2567.6
77.5°	188.6	243.1	375.7	561.2	705.1	782.2	791.5	795.1
80°	138.8	160.9	184.0	210.2	226.6	229.7	224.1	212.3
82.5°	98.2	111.0	120.3	129.5	136.2	130.5	108.4	82.7
85°	57.0	62.7	67.8	72.5	73.5	69.4	45.7	37.5
87.5°	22.6	24.7	24.2	27.2	26.2	24.2	18.0	15.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)